

## *Green Buildings in Alexandria: Policy Recommendations*

### *Appendix #7*

## **Comparison of Green Building Rating Systems**

Rating System and Governing Body	Green Building Design Criteria	Building Types Covered	Certification Process
<p>Leadership in Energy and Environmental Design (<b>LEED</b>) Green Building Rating System™</p> <p>Developed by United States Green Building Council (USGBC)</p> <p>Number of LEED Certified Projects Worldwide: Commercial buildings: 1,004/ Homes: 267</p> <p>Source: <a href="http://www.usgbc.org">http://www.usgbc.org</a></p>	<p>Sustainable site development.</p> <p>Water savings</p> <p>Energy efficiency</p> <p>Materials Selection</p> <p>Indoor environmental quality</p> <p>Innovation in Design</p>	<p>Specific LEED rating systems have been developed for:</p> <ul style="list-style-type: none"> <li>- Homes (currently in pilot stage)</li> <li>- New Commercial Construction and Major Renovations</li> <li>- Existing Building</li> <li>- Commercial Interiors</li> <li>- Core and Shell development</li> <li>- Neighborhood Development</li> <li>- Schools</li> <li>- Retail</li> <li>- Health Care is currently under development</li> </ul>	<p>USGBC conducts third party verification prior to awarding a certification.</p> <p>Cost of certification: \$2,500 to \$22,500 depending on member status, building type and size.</p> <p>Significant documentation required for submittal.</p> <p>Accredited Professional is recommended but not required to be part of the design team</p>
<p><b>EarthCraft House™</b> is a residential green building program of the Greater Atlanta Home Builders Association in partnership with Southface.</p> <p>To date: 4,000 EarthCraft House single family homes and over 1,500 EarthCraft Multifamily dwelling units have been certified.</p> <p>Source: <a href="http://www.earthcrafthouse.com">http://www.earthcrafthouse.com</a></p>	<p>Site Planning</p> <p>Energy Efficient Building Envelope and Systems</p> <p>Resource Efficient Design</p> <p>Resource Efficient Building Materials</p> <p>Waste Management</p> <p>Indoor Air Quality</p> <p>Water Conservation (Indoor and Outdoor)</p> <p>Homeowner Education</p> <p>Builder Operations</p> <p>Bonus/Innovation Points</p>	<p>New and renovated homes, including:</p> <ul style="list-style-type: none"> <li>- Single family homes</li> <li>- Multi-family homes</li> <li>- Duplexes</li> <li>- Townhouses</li> <li>- Low-rise apartment</li> <li>- Condominiums</li> </ul>	<p>Third party certification is conducted by Southface.</p> <p>Cost to builder for joining EarthCraft House program – \$825</p> <p>The EarthCraft House fee for each house is \$0.10/sq.ft. (minimum \$250).</p> <p>The builder is required to:</p> <p>Attend a one-day EarthCraft House training. Attend a design review with EarthCraft House staff to generate an individualized EarthCraft House scoring worksheet.</p> <p>And then participate in a walk-through with EarthCraft House staff.</p>

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<p><b>Green Globes</b> - an on-line auditing tool that lets designers, property owners and managers assess and rate buildings against best practices and standards.</p> <p>Run by the <b>Green Building Initiative™ (GBI)</b>.</p> <p>Source:  <a href="http://www.thegbi.org">http://www.thegbi.org</a></p>	<p>Project Management</p> <p>Site</p> <p>Energy</p> <p>Water</p> <p>Resources</p> <p>Emissions, Effluent and other Impacts</p> <p>Indoor Environment</p>	<p>New commercial building.</p> <p>Existing commercial buildings.</p> <p>The GBI works with NAHB to promote Green Home Building Guidelines which are designed to be a tool kit for the individual builder looking to engage in green building practices and home builder associations (HBAs) looking to launch their own local green building programs.</p>	<p>Third party certification is required to obtain certification but self-certification is an option.</p> <p>\$4,000-\$6,000 per building for third party verification.</p> <p>On line questionnaire required to be completed by building owner.</p>
<p><b>ENERGY STAR</b></p> <p>Buildings that earn the ENERGY STAR are the top performers for energy efficiency nationwide and use about 35 percent less energy than average buildings.</p> <p>Developed by EPA who provides strategies, tools, professional assistance, and recognition opportunities to help buildings and plants improve energy efficiency.</p> <p>More than 3,200 buildings in all 50 states representing almost 575 million square feet have earned the ENERGY STAR label.</p> <p>Source:  <a href="http://www.energystar.gov/">http://www.energystar.gov/</a></p>	<p>Energy Efficiency</p>	<p>Homes and commercial and industrial buildings including offices, bank branches and financial centers, courthouses, hospitals, hotels and motels, K-12 schools, medical offices, supermarkets, dormitories and warehouses.</p>	<p>A Professional Engineer must verify the Statement of Energy Performance for verification to obtain ENERGY STAR rating above 75.</p> <p>No fee.</p>
<p><b>Standard 189P</b> (Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings) is a building standard that is being developed to provide minimum guidelines for</p>	<p>Sustainable sites</p> <p>Water use efficiency</p>	<p>New commercial buildings and major renovation projects.</p> <p>Excludes Low-Rise Residential Buildings.</p>	<p>No certification.</p> <p>It is not a rating system, and is meant to be used in conjunction with other ASHRAE (American Society of Heating, Refrigerating and Air-</p>

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<p>green building practices and will provide a baseline for sustainable design, construction, and operations in order to drive green building into mainstream building practices.</p> <p>Source: Proposed Standard 189, Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings</p> <p>First Public Review (May 2007)</p>	<p>Energy efficiency</p> <p>Building's impact on the atmosphere</p> <p>Materials and resources</p> <p>Indoor environmental quality</p>	<p>Excludes existing buildings.</p>	<p>Conditioning Engineers) standards.</p> <p>Submittals required as outlined in code.</p>
<p><b>BREEAM (Building Research Establishment Environmental Assessment Method)</b></p> <p>BRE is the certification and quality assurance body for BREEAM ratings in the UK.</p> <p>Source: <a href="http://www.breeam.org">http://www.breeam.org</a></p>	<p>Management</p> <p>Health and Wellbeing</p> <p>Energy</p> <p>Transport</p> <p>Water</p> <p>Material and Waste</p> <p>Land Use and Ecology</p> <p>Pollution</p>	<p>Courts</p> <p>Homes</p> <p>Industrial</p> <p>Multi-Residential</p> <p>Prisons</p> <p>Offices</p> <p>Retail</p> <p>Schools</p> <p>Bespoke – system for buildings that fall outside the standard BREEAM categories</p> <p>International can assess a single development or BRE can also assist in creating a BREEAM version for a country or region outside of the UK.</p>	<p>There are several licensed assessment organizations mainly in the UK.</p>

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<b>GREEN STAR</b>  Developed by Green Building Council Australia (GBCA)  Source: <a href="http://www.gbcaus.org">http://www.gbcaus.org</a>	Management  Indoor Environment Quality  Energy  Transport  Water  Materials  Land Use & Ecology  Emissions  Innovation	Commercial office design and construction.  Rating systems have been recently developed for shopping centers, healthcare facilities education facilities, mixed use/ multi-unit residential, industrial, and public buildings.	In Australia, GBCA validates the project's achievement through a formal assessment.